What is claimed is:

1. A process for transitioning from a first polymerization reaction conducted in the presence of a first catalyst system to a second polymerization reaction conducted in the presence of a second catalyst system wherein the first and second catalyst systems are incompatible, the polymerization reaction being conducted in a polymerization zone of a gas phase fluidized bed reactor which contains a fluidized bed of polymer particles by the essentially continuous passage of monomer gases through the polymerization zone, comprising:

a) discontinuing the introduction of the first catalyst system into the reactor;

b) lowering the height of the bed of polymer particles from a first height to a second height;

c) introducing the second catalyst system into the reactor; and

d) increasing the height of the bed of polymer particles to a level above the level of the second height.

2. The process of claim 1 wherein at least one of the catalyst systems includes a metallocene or transition metal containing component.

3. The process of claim 1 wherein one of the catalyst systems includes a metallocene component and the other catalyst system contains a transition metal component.

4. The process of claim 1 wherein the monomer gas comprises ethylene or ethylene and one or more higher alpha olefin monomers.

5. The process of claim 1 further comprising conducting essentially concurrently with the reduction of the height of the bed of polymer particles, at least one modification selected from the group consisting of:

reducing the partial pressure of the monomer gases within the polymerization zone from a first partial pressure to a second lower partial pressure;

reducing the velocity of the monomer gases passing through the reactor from a first velocity to a second velocity; and

introducing an alkoxylated amide or amine into the reactor.

6. The process of claim 5 wherein the partial pressure of the monomer gases present in the polymerization zone is reduced from a first partial pressure to a second lower partial pressure essentially concurrently with the lowering of the height of the bed of polymer particles.

7. The process of claim 6 wherein the second partial pressure of the monomer gases present in the polymerization zone is about 40 to about 90% of the first partial pressure of the monomer gases present in the polymerization zone.

8. The process of claim 7 wherein the second partial pressure of the monomer gases present in the polymerization zone is about 50 to about 70% of the first partial pressure of the monomer gases present in the polymerization zone.

9. The process of claim 6 wherein the partial pressure of the monomer gases present in the polymerization zone is increased from the second partial pressure to a higher level partial pressure essentially concurrently with the increase in the height of the bed of polymer particles.

10. The process of claim 5 wherein the velocity of the monomer gases passing through the reactor is reduced from a first velocity to a second velocity essentially concurrently with the reduction of the height of the bed of polymer particles.

11. The process of claim 10 whereby the velocity of the monomer gases passing through the reactor is reduced from a first velocity of about 2.1 to about 2.4 ft/sec to a second velocity of about 1.7 to about 1.8 ft/sec.

12. The process of claim 10 wherein the velocity of the monomer gases is increased to a level above the level of the second velocity essentially concurrently with the increase in the height of the bed of polymer particles.

13. The process of claim 5 wherein essentially concurrently with the reduction of the height of the bed of polymer particles, the partial pressure of the monomer gases within the polymerization zone is reduced from a first partial pressure to a second lower partial pressure and the velocity of the monomer gases passing through the reactor is reduced from a first velocity to a second velocity.

14. The process of claim 13 wherein essentially concurrently with the increase in the height of the bed of polymer particles, the partial pressure of the monomer within the polymerization zone is increased to a level above the second partial pressure and the velocity of the monomer gases is increased to a level above the second velocity.

15. The process of claim 5 further comprising introducing an alkoxylated amide or amine into the reactor essentially concurrently with the reduction of the height of the bed of polymer particles.

16. The process of claim 15 wherein said alkoxylated amide or amine comprises an ethoxylated fatty acid amine.

17. The process of claim 16 wherein said alkoxylated amide or amine comprises ethoxylated stearyl amine.

18. The process of claim 1 further comprising introducing an alkoxylated amide or amine into the reactor prior to discontinuing the introduction of the first catalyst system into the reactor.

19. The process of claim 18 wherein the alkoxylated amide or amine is maintained within the polymerization zone at a concentration of from about 1 to about 1000 ppmw during the transition from the first catalyst system to the second catalyst system.

20. The process of claim 19 wherein the alkoxylated amide or amine is maintained within the polymerization zone at a concentration of about 15 to about 25 ppmw during the transition from the first catalyst system to the second catalyst system.

21. The process of claim 1 wherein the second height of the bed of polymer particles is about 10 to about 90% of the first height of the bed of polymer particles.

22. The process of claim 20 wherein the second height of the bed of polymer particles is about 40 to about 60% of the first height of the bed of polymer particles.

23. The process of claim 22 wherein the second height of the bed of polymer particles is about 50% of the first height of the bed of polymer particles.

24. The process of claim 21 wherein the height of the bed of polymer particles is reduced from the first height to the second height during a period of about 1 to about 5 hours.

25. The process of claim 24 wherein the second height of the bed of polymer particles is reduced from the first height to the second height during a period of about 1 to about 2 hours.

26. The process of claim 1 wherein following the discontinuation of the introduction of the first catalyst system into the reactor and prior to the lowering of the height of the bed of polymer particles, polymerization conditions are

maintained in the reactor and polymerization is permitted to continue for a period of time to allow the components of the first catalyst system present in the reactor to produce additional polymer particles.

27. The process of claim 26 wherein the components of the first catalyst system present in the polymerization zone are permitted to produce additional polymer for a period of up to 5 hours after discontinuing the introduction of the first catalyst system into the polymerization zone.

28. The process of claim 27 wherein the components of the first catalyst system present in the reactor are permitted to produce additional polymer for a period of up to 15 minutes after discontinuing the introduction of the first catalyst system into the reactor.

29. The process of claim 1 wherein the second catalyst system is not introduced into the reactor until after essentially all of the first catalyst system has been consumed in the course of the first polymerization reaction.

30. The process of claim 1 further comprising permitting the components of the second catalyst system present in the reactor to produce polymer particles for a period of time before increasing the height of the bed of polymer particles to a level above the level of the second height.

31. The process of claim 30 wherein the components of the second catalyst system present in the reactor are permitted to produce polymer particles for a period of up to 48 hours before increasing the height of the bed of polymer particles to a level above the level of the second height.

32. The process of claim 31 wherein the components of the second catalyst system present in the reactor are permitted to produce polymer particles for a period of about 1 to about 12 hours before increasing the height of the bed of polymer particles to a level above the level of the second height.

33. A process for transitioning from a first polymerization reaction conducted by the essentially continuous passage of monomer gases through the polymerization zone of a gas phase fluidized bed reactor in the presence of a first catalyst system to a second polymerization reaction conducted in the presence of a second catalyst system, wherein said monomer polymerization reaction is conducted in the polymerization zone of said reactor which contains a fluidized bed of polymer particles, comprising:

a) discontinuing the introduction of the first catalyst system into the reactor;

b) lowering the height of the bed of polymer particles from a first height to a second height;

c) essentially concurrently with the reduction of the height of the bed of polymer particles, reducing the entrainment of fines from the fluidized bed of polymer particles;

d) introducing the second catalyst system into the reactor; and

e) increasing the height of the bed of polymer particles to a level above the level of the second height.

34. The process of claim 33 wherein at least one of the catalyst systems includes a metallocene or transition metal containing component.

35. The process of claim 33 wherein one of the catalyst systems includes a metallocene component and the other catalyst system contains a transition metal component.

36. The process of claim 33 wherein the monomer gas comprises ethylene or ethylene and one or more higher alpha olefin monomers.

37. The process of claim 33 wherein the entrainment of fines is reduced by at least one modification selected from the group consisting of:

reducing the velocity of the monomer gases passing through the reactor from a first velocity to a second velocity;

reducing the total pressure in the reactor;

reducing the cycle gas density;

increasing the average particle size of polymer particles in the fluidized bed;

narrowing the particle size distribution of polymer particles in the fluidized bed; and

changing the morphology of the particles whereby the sphericity of the particles is reduced.

38. The process of claim 37 wherein the entrainment of fines is reduced by reducing the velocity of the monomer gases passing through the reactor from a first velocity to a second velocity essentially concurrently with the reduction of the height of the bed of polymer particles.

39. The process of claim 38 wherein the velocity of the monomer gases passing through the reactor is reduced from a first velocity of about 2.1 to about 2.4 ft/sec to a second velocity of about 1.0 to about 1.5 ft/sec.

40. The process of claim 37 wherein the entrainment of fines is reduced by reducing the total pressure in the reactor to a total pressure in the range of about 50 to about 250 psi.

41. The process of claim 37 wherein the entrainment of fines is reduced by reducing the cycle gas density to a density of about 0.5 to about 1.2 lb/ft^3.

42. The process of claim 37 wherein the entrainment of fines is reduced by increasing the average particle size of polymer product to a size in the range of about 0.025 to about 0.15 inches.

43. The process of claim 37 wherein the entrainment of fines is reduced by narrowing the particle size distribution of polymer product wherein about 0 to about 2 weight-percent of particles having a size of 120 microns.

44. The process of claim 37 wherein the entrainment of fines is reduced by changing the particle morphology of polymer product to have a reduced sphericity in the range of about 0.3 to about 0.7.

45. A process for transitioning from a first polymerization reaction conducted by the essentially continuous passage of monomer gases through the polymerization zone of a gas phase fluidized bed reactor in the presence of a first catalyst system to a second polymerization reaction conducted in the presence of a second catalyst system, wherein said monomer polymerization reaction is conducted in the polymerization zone of said reactor which contains a fluidized bed of polymer particles, comprising:

a) discontinuing the introduction of the first catalyst system into the reactor;

b) lowering the height of the bed of polymer particles from a first height to a second height;

c) essentially concurrently with the reduction of the height of the bed of polymer particles, reducing the fluidized bulk density of the fluidized bed of polymer particles;

d) introducing the second catalyst system into the reactor; and

e) increasing the height of the bed of polymer particles to a level above the level of the second height.

46. The process of claim 45 wherein at least one of the catalyst systems includes a metallocene or transition metal containing component.

47. The process of claim 45 wherein one of the catalyst systems includes a metallocene component and the other catalyst system contains a transition metal component.

48. The process of claim 45 wherein the monomer gas comprises ethylene or ethylene and one or more higher alpha olefin monomers.

49. The process of claim 45 wherein the fluidized bulk density is reduced by at least one modification selected from the group consisting of:

increasing the velocity of the monomer gases passing through the reactor from a first velocity to a second velocity;

increasing the cycle gas density;

selecting a second catalyst that produces a product having a lower fluidized bulk density particle or one that produces a lower fluidized density than the product produced by the first catalyst;

reducing the average particle size of polymer particles in the fluidized bed; and

changing the morphology of the particles whereby the sphericity of the particles is reduced.

50. A process for transitioning from a first polymerization reaction conducted in the presence of a first catalyst system to a second polymerization reaction conducted in the presence of a second catalyst system, the polymerization reaction being conducted in a polymerization zone of a gas phase fluidized bed reactor which contains a fluidized bed of polymer particles by the essentially continuous passage of monomer gases through the polymerization zone, comprising:

a) discontinuing the introduction of the first catalyst system into the reactor;

b) introducing a poison or behavior modifier for the first catalyst system to inhibit said first polymerization reaction;

c) lowering the height of the bed of polymer particles from a first height to a second height;

d) essentially concurrently with the lowering of the height of the bed of polymer particles the partial pressure of the monomer gases within the

polymerization zone is reduced from a first partial pressure to a second lower partial pressure;

e) essentially concurrently with the lowering of the height of the bed of polymer particles the velocity of the monomer gases passing through the reactor is modified from a first velocity to a second velocity;

f) introducing the second catalyst system into the reactor;

g) increasing the height of the bed of polymer particles to a level above the level of the second height; and

h) essentially concurrently with the increase of the height of the bed of polymer particles to the second height, the partial pressure of the monomer gases within the polymerization zone is increased to a level above the second partial pressure and the velocity of the monomer gases passing through the reactor is adjusted to the first velocity.

51. The process of claim 50, wherein the velocity of the monomer gases passing through the reactor is modified from a first velocity to a second higher velocity to reduce the fluidized bulk density of the bed of polymer particles.

52. The process of claim 50, wherein the velocity of the monomer gases passing through the reactor is modified from a first velocity to a second lower velocity to reduce the entrainment of active particles of the first catalyst system above the level of the bed of polymer particles.

53. The process of claim 50, wherein essentially concurrently with the lowering of the bed of polymer particles, fouling of the walls of the reactor is inhibited by at least one device selected from the group consisting of: acoustic hammers, sonic hammers, tangential flow cleaning systems and external wall temperature control systems.

54. The process of claim 50, wherein said second catalyst system is introduced into the reactor in a modified form wherein said second catalyst system is less active.

55. The process of claim 54, wherein said second catalyst system is modified to standard activity essentially concurrently with the increase of the height of the bed of polymer particles to the second height, the increase of the partial pressure of the monomer gases within the polymerization zone to a level above the second partial pressure and the adjustment of the velocity of the monomer gases passing through the reactor to the first velocity.

56. A process for transitioning from a first polymerization reaction product a first polymer to a second polymerization reaction producing a second polymer, wherein both the first and second polymers are produced in presence of the same polymerization catalyst system, the polymerization reaction being conducted in a polymerization zone of a gas phase fluidized bed reactor that contains a fluidized bed of polymer particles by the essentially continuous passage of monomer gases through the polymerization zone and the polymers are discharged from the reactor into a discharge system, comprising:

a) discontinuing the introduction of the catalyst system into the reactor;

b) lowering the height of the bed of polymer particles from a first height to a second height by controlling the discharge system to provide an increased discharge rate;

c) setting the reactor conditions to produce the second polymer; and

d) increasing the height of the bed of polymer particles to a level above the level of the second height.